

REMARKS

In view of the above amendments and the following remarks, reconsideration is requested.

By this amendment, claims 42-47 have been canceled in favor of new claims 48-53.

Support for the new claims can be found at least at: column 43, lines 12-15; Fig. 137 (particularly ECC 744a); and Fig. 160.

Claims 42-47 were provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 24-35 of copending application 09/677,421 in view of Calderbank and Divsalar. Claims 42-47 were also rejected under 35 USC 103(a) as being unpatentable over Farias in view of Calderbank and Divsalar. These rejections are traversed for the following reasons.

Each of claims 48-53 include recitations drawn to Reed-Solomon encoding the second data stream, but not Reed Solomon encoding the first data stream. As acknowledged by the Examiner, claims 24-35 of co-pending application 09/677,421 do not recite such a particular arrangement of Reed-Solomon encoding and/or decoding. Also, the primary reference, Farias, does not disclose or suggest such a particular arrangement of Reed-Solomon encoding and/or decoding.

Thus, the Examiner relies on Divsalar in each rejection for a teaching of Reed-Solomon encoding. However, while Reed-Solomon encoding, per se, is known in the art, the Divsalar reference and the combinations proposed by the Examiner do not disclose or suggest the particular arrangement of Reed-Solomon encoding and/or decoding recited in claims 48-53.

The inventions of claims 48-53 are directed to apparatuses and methods for transmitting and/or receiving modulated signals having information of a first and second data stream. The first data stream has data for demodulation including the number of signal points of the constellation of the second data stream. The signals carrying the first and second data streams are treated differently. For example, claim 48 recites a modulator operable to modulate the first data stream without being Reed-Solomon encoded. Claim 48 also recites a Reed Solomon encoder operable to Reed-Solomon encode the second data stream, and that the modulator is operable to modulate the Reed-Solomon encoded data stream. At the receiving side, claim 48 recites a demodulator, which after demodulation, produces the first data stream and a "demodulated data stream" (which carries the

Reed-Solomon encoded second data stream). This demodulated data stream is produced according to the data for demodulation in the first data stream. Claim 48 also recites a Reed-Solomon decoder operable to Reed-Solomon decode the “demodulated data stream” to yield the second data stream.

As is clear from the above, there are several considerations in implementing a system wherein a first data stream is Reed-Solomon encoded and a second data stream is not Reed-Solomon encoded. As discussed above, the first data stream includes data for demodulation including the number of signal points of the constellation of the second data stream, and such data for demodulation is utilized in the reproduction of the second data stream. Thus, it is beneficial that the first data stream be quickly demodulated without the need to perform the extra step of Reed-Solomon decoding so that the second data stream can be obtained quickly.

The Divsalar reference discloses the use of Reed-Solomon encoding. As stated above, Reed-Solomon encoding, per se, is known. Divsalar merely discloses such known use of Reed-Solomon encoding, but does not provide any disclosure or suggestion of the two data stream implementation of claims 48-53 discussed in detail above. A person having ordinary skill in the art would not have found it obvious to apply the teaching of Reed-Solomon encoding, per se, of Divsalar to the claims of 09/677,421 or the system of Farias in such a way to arrive at the particular arrangement of Reed-Solomon encoding of one data stream and not the other as recited in claims 48-53 of the present application. Accordingly, claims 48-53 would not have been obvious in light of Farias, 09/677,421, and Divsalar.

The Calderbank reference was relied on by the Examiner in each rejection for disclosing use of PSK or QAM modulation, but the reference does not supply any suggestion regarding the particular arrangement of Reed-Solomon encoding recited in claims 48-53.

In view of the above, it is submitted that claims 48-53 are allowable over the prior art of record and the claims of copending application 09/677,421. It is therefore submitted that the present application is in condition for allowance.

The Examiner is invited to contact the undersigned attorney by telephone to resolve any remaining issues.

Respectfully submitted,

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